

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE(PCT Rule 92bis.1 and
Administrative Instructions, Section 422)Date of mailing (day/month/year)
14 June 2001 (14.06.01)

From the INTERNATIONAL BUREAU

To:

NASSIF, Omar, A.
Gowling Lafleur Henderson LLP
Suite 4900
Commerce Court West
Toronto, Ontario M5L 1J3
CANADA

Applicant's or agent's file reference T8465248WO	IMPORTANT NOTIFICATION
International application No. PCT/CA00/01002	International filing date (day/month/year) 01 September 2000 (01.09.00)

1. The following indications appeared on record concerning:

the applicant the inventor the agent the common representative

Name and Address NASSIF, Omar, A. Gowling, Strathy & Henderson Suite 4900 Commerce Court West Toronto, Ontario M5L 1J3 Canada	State of Nationality	State of Residence
	Telephone No.	416-862-5775
	Facsimile No.	416-862-7661
	Teleprinter No.	

2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:

the person the name the address the nationality the residence

Name and Address NASSIF, Omar, A. Gowling Lafleur Henderson LLP Suite 4900 Commerce Court West Toronto, Ontario M5L 1J3 Canada	State of Nationality	State of Residence
	Telephone No.	416-862-5775
	Facsimile No.	416-862-7661
	Teleprinter No.	

3. Further observations, if necessary:

The indication of a new address of the agent on the Demand (Form PCT/IPEA/401) has been considered a request for recording a change under Rule 92bis. In case of disagreement, the International Bureau should be notified immediately.

4. A copy of this notification has been sent to:

<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned
<input checked="" type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:

The International Bureau of WIPO 34, chemin des Colibinettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Claudio Borton Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

From the INTERNATIONAL BUREAU

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NOTIFICATION OF ELECTION
(PCT Rule 61.2)

Date of mailing (day/month/year) 14 June 2001 (14.06.01)	To: Commissioner US Department of Commerce United States Patent and Trademark Office, PCT 2011 South Clark Place Room CP2/5C24 Arlington, VA 22202 ETATS-UNIS D'AMERIQUE in its capacity as elected Office
International application No. PCT/CA00/01002	Applicant's or agent's file reference T8465248WO
International filing date (day/month/year) 01 September 2000 (01.09.00)	Priority date (day/month/year) 03 September 1999 (03.09.99)
Applicant SASGES, Michael et al	

1. The designated Office is hereby notified of its election made:

in the demand filed with the International Preliminary Examining Authority on:

02 April 2001 (02.04.01)

in a notice effecting later election filed with the International Bureau on:

2. The election was

was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Claudio Borton
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PATENT COOPERATION TREATY
PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference T8465248W0	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/CA 00/ 01002	International filing date (day/month/year) 01/09/2000	(Earliest) Priority Date (day/month/year) 03/09/1999
Applicant TROJAN TECHNOLOGIES INC. et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).
- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :
 - contained in the international application in written form.
 - filed together with the international application in computer readable form.
 - furnished subsequently to this Authority in written form.
 - furnished subsequently to this Authority in computer readable form.
 - the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
 - the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. **Certain claims were found unsearchable** (See Box I).

3. **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

- the text is approved as submitted by the applicant.
- the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant.
- the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

- as suggested by the applicant.
- because the applicant failed to suggest a figure.
- because this figure better characterizes the invention.

1

None of the figures.

INTERNATIONAL SEARCH REPORT

International application No.

CA 00/01002

Box III TEXT OF THE ABSTRACT (Continuation of item 5 of the first sheet)

The abstract is changed as follow:

Line 2: after "collector" insert "(152)";
Line 4: after "element" insert "(154)".

INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 00/01002

A. CLASSIFICATION OF SUBJECT MATTER
 IPC 7 C02F1/32 G01J1/04

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHEDMinimum documentation searched (classification system followed by classification symbols)
 IPC 7 C02F G01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	DE 297 07 052 U (DELTA UV SERVICE & SYSTEME GMB) 6 November 1997 (1997-11-06)	1-4, 6, 7, 10-15, 17, 18, 21
Y	the whole document	5, 9, 16, 20, 32-35, 37, 38, 41
Y	US 5 660 719 A (ALBERTAZZI PAUL ET AL) 26 August 1997 (1997-08-26)	32-35, 37, 38, 41
A	column 8, line 37-48; figure 2 ---	22-26
Y	US 5 452 135 A (MAKI KIMIO ET AL) 19 September 1995 (1995-09-19)	5, 9, 16, 20
A	the whole document ---	26, 30, 36, 40
		-/-

 Further documents are listed in the continuation of box C. Patent family members are listed in annex.

° Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

& document member of the same patent family

Date of the actual completion of the international search

Date of mailing of the international search report

24 January 2001

31/01/2001

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
 NL - 2280 HV Rijswijk
 Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
 Fax: (+31-70) 340-3016

Authorized officer

Gruber, M

INTERNATIONAL SEARCH REPORT

International Application No

PCT/A 00/01002

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 103 167 A (ELLNER SIDNEY) 25 July 1978 (1978-07-25) column 4, line 24-41; figures 3A,3B ---	32-41
A	US 4 602 162 A (CLUZEL JOHN M ET AL) 22 July 1986 (1986-07-22) the whole document -----	

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/CA 00/01002

Patent document cited in search report		Publication date	Patent family member(s)		Publication date
DE 29707052	U	06-11-1997	NONE		
US 5660719	A	26-08-1997	CA	2139887 A	24-06-1996
US 5452135	A	19-09-1995	JP	3092276 B	25-09-2000
			JP	5175908 A	13-07-1993
US 4103167	A	25-07-1978	DE	2825672 A	13-12-1979
			GB	1602209 A	11-11-1981
			US	RE34513 E	18-01-1994
US 4602162	A	22-07-1986	NONE		

PATENT COOPERATION TREATY

From the
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

NASSIF, Omar, A. et al.
Gowling Lafleur Henderson LLP
Suite 4900
Commerce Court West
Toronto, Ontario M5L 1J3
CANADA

RECEIVED

PCT

30/10/2001 NOTIFICATION OF TRANSMITTAL OF
THE INTERNATIONAL PRELIMINARY
EXAMINATION REPORT
(PCT Rule 71.1)

GOWLING LAFLEUR HENDERSON LLP
PATENT DEPARTMENT

Date of mailing
(day/month/year) 25.10.2001

Applicant's or agent's file reference
T8465248WO

IMPORTANT NOTIFICATION

International application No. PCT/CA00/01002	International filing date (day/month/year) 01/09/2000	Priority date (day/month/year) 03/09/1999
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Applicant
TROJAN TECHNOLOGIES INC. et al.

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.

4. REMINDER

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices) (Article 39(1)) (see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Ferro Vasconcelos, M Tel. +49 89 2399-7905 8041
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PATENT COOPERATION TREATY
PCT
INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)

Applicant's or agent's file reference T8465248WO	FOR FURTHER ACTION	See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No. PCT/CA00/01002	International filing date (<i>day/month/year</i>) 01/09/2000	Priority date (<i>day/month/year</i>) 03/09/1999
International Patent Classification (IPC) or national classification and IPC C02F1/32		
<p>Applicant TROJAN TECHNOLOGIES INC. et al.</p> <p>1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p><input type="checkbox"/> This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).</p> <p>These annexes consist of a total of sheets.</p> <p>3. This report contains indications relating to the following items:</p> <ul style="list-style-type: none"> I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input checked="" type="checkbox"/> Certain observations on the international application 		
Date of submission of the demand 02/04/2001	Date of completion of this report 25.10.2001	
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer Schwaller, J-M Telephone No. +49 89 2399 8351	



**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/CA00/01002

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, pages:

1-8 as originally filed

Claims, No.:

1-41 as originally filed

Drawings, sheets:

1/3-3/3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- the language of publication of the international application (under Rule 48.3(b)).
- the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- contained in the international application in written form.
- filed together with the international application in computer readable form.
- furnished subsequently to this Authority in written form.
- furnished subsequently to this Authority in computer readable form.
- The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- the description, pages:
- the claims, Nos.:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/CA00/01002

the drawings, sheets:

5. This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims
	No: Claims 1-4, 6-7, 10-15, 17-18, 21
Inventive step (IS)	Yes: Claims
	No: Claims 1-41
Industrial applicability (IA)	Yes: Claims 1-41
	No: Claims

**2. Citations and explanations
see separate sheet**

VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:
see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/CA00/01002

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. **D1**= DE 29707052 U (Figure 1) discloses an optical radiation sensor device for detecting (UV) radiation in a radiation field, said device comprising:
 - a radiation collector (9) for receiving radiation from a predefined arc around the collector within the field and redirecting the received radiation along a predefined pathway, and
 - a sensor element (12) capable of detecting and responding to incident radiation along the pathwaythus **anticipating** the subject-matter of claim 1.

The subject-matter of claims 4, 6-7, 10-15, 17-18 and 21 being also disclosed in **D1** (see in particular the Figure and the corresponding parts of the description), the above claims do not meet the requirements of Article 33(1) and (2) PCT.

2. The other (dependent or independent) claims 5, 8-9, 16, 19-20, 21-41 do not appear to contain any additional feature(s) which, in combination with the features of any of the claims mentioned in item 2 supra, meet the requirements of the PCT in respect of inventive step (Article 33(3) PCT), the said additional features being either trivial or already known from the documents **D2** = US-A-5660719 and **D3** = US-A-5452135 (see in this respect the passages cited in the search report)

Re Item VIII

Certain observations on the international application

Although claims 1, 11, 22, 32 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only with regard to the definition of the subject-matter for which protection is sought and/or in respect of the terminology used for the features of that subject-matter. The aforementioned claims therefore **lack conciseness**.

Moreover, **lack of clarity** of the claims as a whole arises, since the plurality of independent claims makes it difficult, if not impossible, to determine the matter for which protection is

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/CA00/01002

sought, and places an undue burden on others seeking to establish the extent of the protection.

Hence, said claims do not meet the requirements of Article 6 PCT.

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 March 2001 (15.03.2001)

PCT

(10) International Publication Number
WO 01/17907 A1

(51) International Patent Classification⁷: C02F 1/32, G01J 1/04

(21) International Application Number: PCT/CA00/01002

(22) International Filing Date: 1 September 2000 (01.09.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data: 60/152,287 3 September 1999 (03.09.1999) US

(71) Applicant (for all designated States except US): TROJAN TECHNOLOGIES INC. [CA/CA]; 3020 Gore Road, London, Ontario N5V 4T7 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SASGES, Michael [CA/CA]; 320-B Erb Street West, Waterloo, Ontario N2L 1W3 (CA). VANDOODEWAARD, Peter, C. [CA/CA]; 18 Marlene Street, St. Thomas, Ontario N5R 1B3 (CA).

(74) Agents: NASSIF, Omar, A. et al.; Gowling, Strathy & Henderson, Suite 4900, Commerce Court West, Toronto, Ontario M5L 1J3 (CA).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

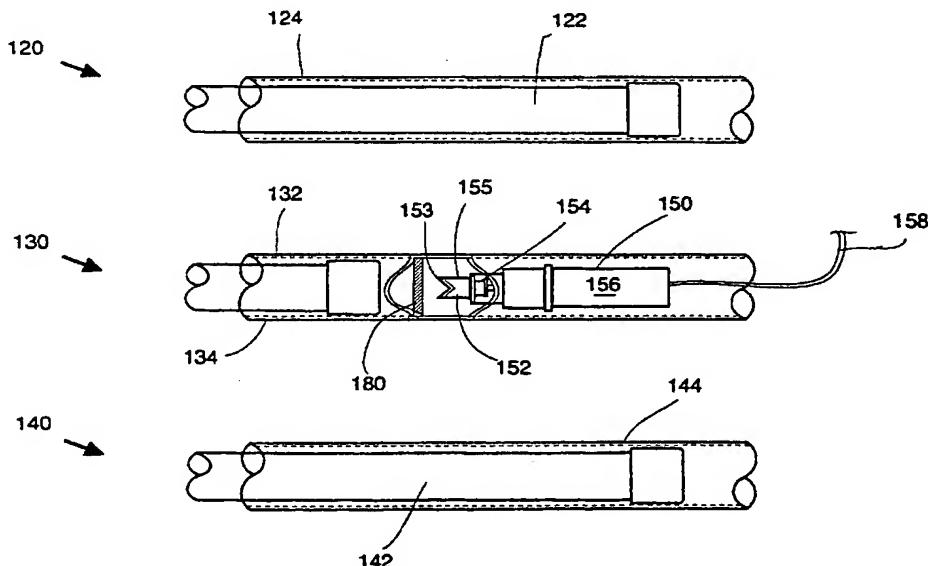
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:

— With international search report.

[Continued on next page]

(54) Title: OPTICAL RADIATION SENSOR DEVICE AND USE IN A RADIATION SOURCE MODULE



WO 01/17907 A1

(57) Abstract: An optical radiation sensor device for detecting radiation in a radiation field, the device comprising: a radiation collector (152) for receiving radiation from a predefined arc around the collector within the field and redirecting the received radiation along a predefined pathway; and a sensor element (154) capable of detecting and responding to incident radiation along the pathway. A radiation source assembly, a radiation source module and fluid treatment system comprising the optical radiation sensor are also disclosed.



— Before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments.

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.